

*Examiner's Amendment/Reasons for Allowance*

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a facsimile from Christa Hildebrand on Monday, June 2, 2008.

The application has been amended as follows:

On page 2 of the reply filed 3/5/08, in claim 22, section a):

Remove: "first experiment from"

Insert: "first experiment, **previously performed**, from"

On page 2 of the reply filed 3/5/08, in claim 22, section d):

Remove: "evaluation data and wherein"

Insert: "evaluation data **which comprises** rules and wherein"

On page 2 of the reply filed 3/5/08, in claim 22, section e):

Remove: "experiment design data."

Insert: "experiment design data **generated using the experimentally determined experiment result data from the first experiment.**"

On page 4 of the reply filed 3/5/08, in line 5 of claim 36:

Remove: "one first experiment from"

Insert: "one first experiment, **previously performed**, from"

On page 5 of the reply filed 3/5/08, in line 19 of claim 36:

Art Unit: 2129

Remove: “experimentally determined equipment result data”

Insert: “experimentally determined ~~equipment~~ experiment result data”

On page 5 of the reply filed 3/5/08, in line 21 of claim 36:

Remove: “experiment design data.”

Insert: “experiment design data generated using the experimentally determined experiment result data from the first experiment.”

2. Claims 22-44 allowed.

3. The following is an examiner's statement of reasons for allowance: claims 22-44 are considered allowable since when reading the claims in light of the specification, as per MPEP § 2111.01, none of the references of record alone or in combination disclose or suggest the combination of limitations specified in the independent claims.

None of the references of record alone or in combination disclose or suggest the combination of limitations of selecting at least a first experiment from an experimental space including a plurality of experiments using a data-driven optimizer (as supported at ¶ 0037), inputting to at least one meta layer module experimentally determined experiment result data of the first experiment generated in the experimental space (as supported at ¶ 0038), wherein the experimentally determined experiment result data of the first experiment comprises knowledge obtained while the experiment is performed (as supported at ¶ 0038), evaluating the experimentally determined experiment result data of the first experiment at the meta layer module (as supported at ¶ 0039), wherein the meta layer module generates evaluation data based on the evaluating of the experimentally determined experiment result data (as supported at ¶ 0039), and wherein the evaluation data includes rules generated by performing data analysis on

Art Unit: 2129

the experimentally determined experiment result data (as supported at ¶ 0039), processing the experimentally determined experiment result data of the first experiment at the optimizer (as supported at ¶ 0039), wherein the processing at the optimizer is influenced by the evaluation data and wherein the optimizer generates experiment design data based on the processing of the experimentally determined experiment result data (as supported at ¶ 0039) and outputting an experiment design based on the experiment design data (as supported at ¶ 0044), as specified in claims 22 and 36.

Regarding 35 USC 101, the examiner takes the position that the applicant's claimed invention transforms the underlying "experiment result data" into an "experiment design" and produces a concrete, useful, and tangible result in the "[output] experiment design based on the [input] experiment design data". This concrete, useful and tangible result is further exemplified in the applicant teaching that "convergence speed is considerably increased by tuning according to the invention when, for example, optimizing the design of experiments for catalysts, active ingredients or materials or reaction conditions," in his specification at paragraph 0042.

The examiner has found that Wang et al. (USPN 6,996,550, referred to as Wang) is the closest prior art of record teaching (or suggesting) an invention that designs and prepares experiments. However, the examiner has found that the distinct feature of the applicant's claimed invention over the prior art is the claimed use of "experimentally determined experiment result data of the first experiment [which] comprises knowledge obtained while the experiment is [being] performed", which is patentably distinct from the "experimental constraints" taught by Wang. Furthermore, the claimed use of "experimentally determined experiment result data" combined with the claimed use of "at least one meta layer module" has further distinguished the

Art Unit: 2129

applicant's claimed invention from the prior art.

*Correspondence Information*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adrian L. Kennedy whose telephone number is (571) 270-1505. The examiner can normally be reached on Mon -Fri 8:30am-5pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Vincent can be reached on (571) 272-3080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ALK

David Vincent  
Supervisory Patent Examiner  
Technology Center 2100

/Joseph P. Hirl/

Primary Examiner, Art Unit 2129